

WEST MICHIGAN AVENUE BRIDGE
Spanning the Battle Creek River at West Michigan Avenue
Battle Creek
Calhoun County
Michigan

HAER No. MI-65

HAER
MICH
13-BATCH
3-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

HISTORIC AMERICAN ENGINEERING RECORD

WEST MICHIGAN AVENUE BRIDGE

HAER NO. MI-65

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13-BATCH,
3-

Location: West Michigan Avenue, spanning the Battle Creek River, Battle Creek, Calhoun County, Michigan

Quad: Battle Creek, Michigan, 7.5 minute
USTM Coordinates: 16.649467.4686994

Date of Construction: 1903 (reconstructed in 1935 by replacement of deck, sidewalk and railing)

Engineer: Murray D. VanWagoner, State Road Commissioner and J.A. Cissel, Bridge Engineer

Present Owner: City of Battle Creek, Michigan

Present Use: Vehicular and pedestrian traffic

Significance: On April 1, 1986, the Michigan State Historic Preservation Office (SHPO) determined that the West Michigan Avenue Bridge, was eligible to be listed on the National Register of Historic Places. Its significance as an earth-filled concrete arch of two spans, is based on it being a rare bridge type for those surviving in Michigan.

Project Information: As a result of a bridge inspection report and environmental assessment, pursuant to the National Environmental Policy act (NEPA), it was recommended that the West Michigan Avenue Bridge be replaced. The structural integrity of the deck and arches was determined to be compromised beyond the feasibility to rehabilitate or reconstruct the bridge. To mitigate the adverse effect, the SHPO stipulated HAER documentation. This documentation was undertaken to fulfill requirements of the Memorandum of Agreement.

Blair R. Webster
Snell Environmental Group, Inc.
1120 May Street
Lansing, Michigan 48906

HISTORICAL INFORMATION

The West Michigan Avenue Bridge over the Battle Creek River was designed and constructed in 1903 by the Michigan State Highway Department. It was reconstructed in 1935, with replacement of the deck, sidewalk and railing at that time. The previous deck, railing and sidewalk was all concrete, whereas the reconstructed deck had pavers placed over the concrete base and the new railing consists of steel rails with concrete pilasters. The 1935 sidewalk was reconstructed essentially as it had previously existed.

The original context of the bridge was set in a downtown commercial business district of Battle Creek, as it is today. In fact, there were buildings abutting the northeast side of the bridge on pilings over the river until 1992, when they were removed by the City. The West Michigan Avenue Bridge remained as it was reconstructed in 1935, until the buildings along the northeast side were removed.

The bridge was constructed as a concrete arch structure due to the aesthetic appeal of this type of bridge and a common engineering design in the time period of this design, as well as the site characteristics of the river crossing. The location of the bridge is based on West Michigan Avenue being a major arterial to downtown Battle Creek and the fact that there was a previous bridge in the same location. These criteria for location were established prior to construction of the subject bridge. It was design and engineered by the City of Battle Creek in cooperation with the Michigan Department of State Highways.

There are no known events or history associated with this bridge.

DESCRIPTIVE INFORMATION

The West Michigan Avenue Bridge over the Battle Creek River is located in the City of Battle Creek, Calhoun County, Michigan. It is also located in Section 1 of Battle Creek Township, (T2S, R8W). The bridge is owned and maintained by the City of Battle Creek. It is in the downtown business district of the City. As such, it connects commercial and public facilities on both sides of the river.

The bridge is aligned on a northwest-southeast axis. It is accessible from the south by Carlyle Street and from the north by Tompkins Street, as well as from Jackson Street to the southeast, which becomes Michigan Avenue. All of these streets, including the bridge, have two lanes with one in each direction. On Michigan Avenue, there is parking on both sides of the street up to either end of the bridge.

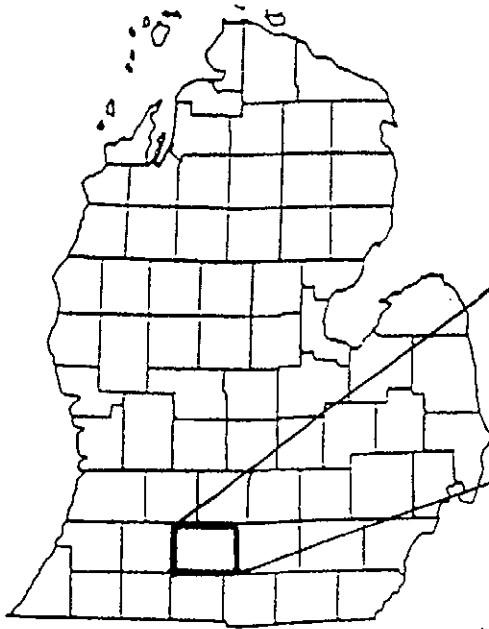
The West Michigan Avenue bridge is 109 feet long and 65.5 feet, which includes the total length and width of the concrete deck. It is qualified as an earth filled concrete arch consisting of two arches. There is concrete and steel rail (Type R-4 FHWA designation with vertical

steel bars and internal strings on the top and bottom strung between concrete pilasters) on the northeast side and temporary barrier railing on the southwest side, where buildings abutting the bridge have been removed.

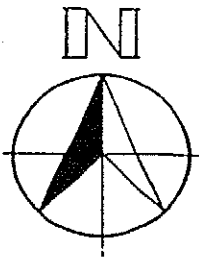
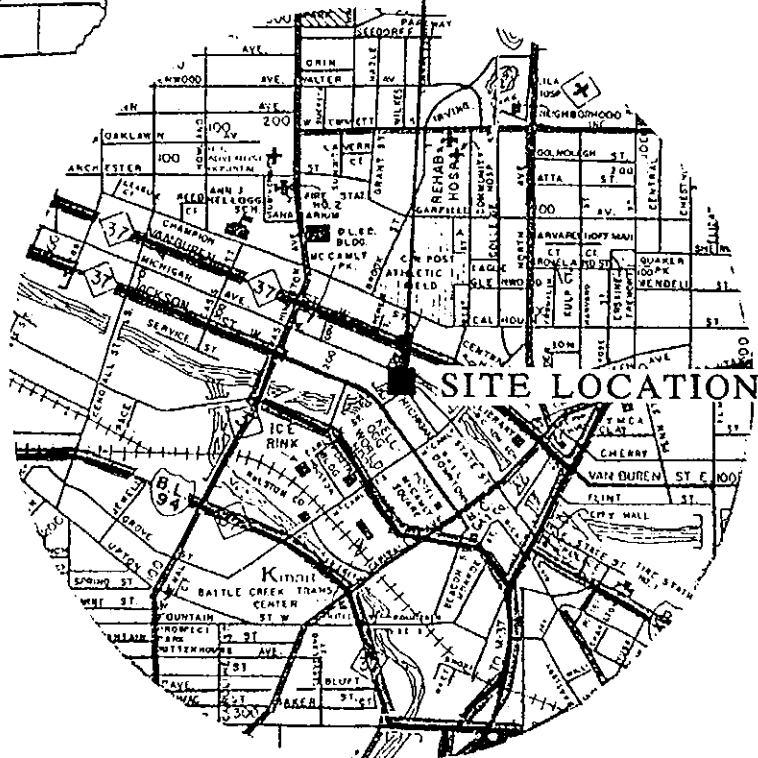
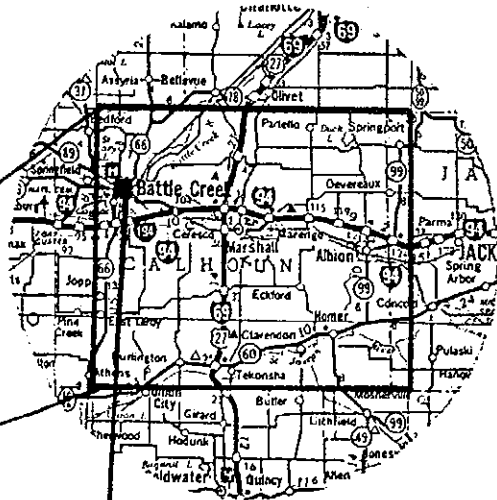
The West Michigan Avenue Bridge was chosen as a fine example of its type due to the rarity of concrete arch structures still existing and constructed before 1905, the relatively good condition of the overall bridge and its setting in an urban environment.

SOURCES OF INFORMATION/BIBLIOGRAPHY

- A. **Engineering Drawings:** The original drawings (1935) are on file with the Michigan State Bureau of History, and were produced in 1933 and 1934. These plans are representative of the bridge as it currently exists, with the exception of lighting, that was removed between 1960 and 1970.
- B. **Historic Views:** After searching the Battle Creek Public Library system, the State Archives and the Calhoun County Historical Society records, no historical photos of the bridge were found.
- C. **Interviews:** An interview with the City engineer for Battle Creek and the City librarian yielded no additional information over what was already available. These were the only interviews conducted.
- D. **Bibliography:** Other than the material already included and documented, there is no other primary/unpublished or secondary/published sources.
- E. **Likely Sources Not Yet Investigated:** All known and/or potential sources have been investigated, other than sources of information held in private collections, but not currently available.
- F. **Supplemental Material:** Currently there are no known sources of supplemental material.



CALHOUN
COUNTY



WEST MICHIGAN AVENUE BRIDGE
OVER THE BATTLE CREEK RIVER

LOCATION MAP

SCALE: NONE

PLAN VIEW OF
EXISTING BRIDGE

WEST MICHIGAN AVENUE BRIDGE
OVER THE BATTLE CREEK RIVER

West Michigan Avenue Bridge
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STATE ST. N

BATTLE CREEK RIVER

EXISTING RIVERFRONT PARK

EXISTING PATH

TOMPKINS ST.

BING PATH

BRIDGE

BUILDING

CARLYLE ST.

SITE PLAN

EXISTING STRUCTURE
2-SPAN CONCRETE
ARCH BRIDGE. (TO
BE REMOVED)

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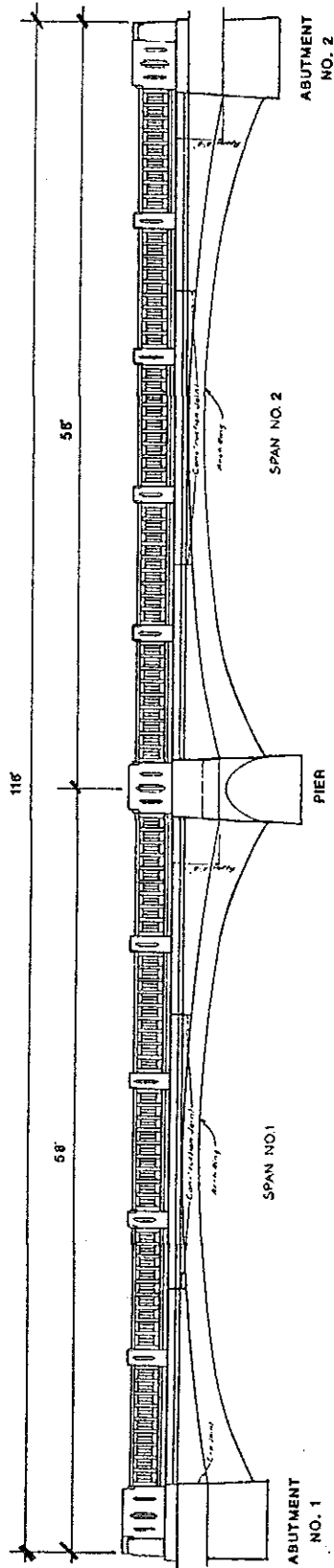
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WEST MICHIGAN AVENUE BRIDGE OVER THE BATTLE CREEK RIVER	PLAN VIEW OF EXISTING SITE	SCALE: AS NOTED
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WEST MICHIGAN AVENUE BRIDGE OVER THE BATTLE CREEK RIVER	PLAN VIEW OF EXISTING SITE	SCALE: AS NOTED
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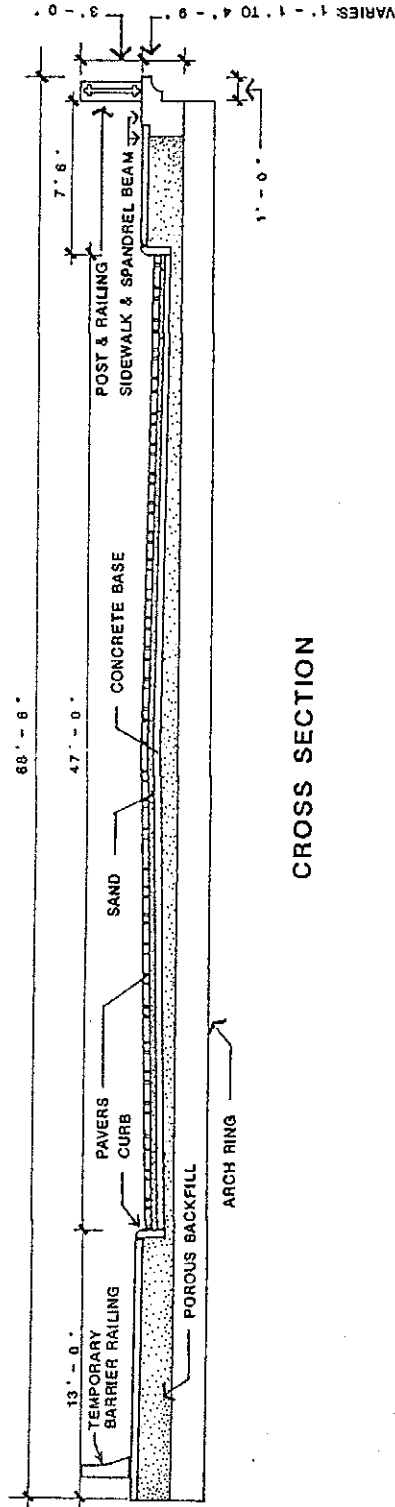
WEST MICHIGAN AVENUE BRIDGE OVER THE BATTLE CREEK RIVER	PLAN VIEW OF EXISTING SITE	SCALE: AS NOTED
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West Michigan Avenue Bridge
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APPROX. SCALE : 1/8" = 1'

PROFILE
(FROM THE NORTHEAST)



CROSS SECTION

WEST MICHIGAN AVENUE BRIDGE
OVER THE BATTLE CREEK RIVER

PROFILE AND CROSS SECTION
OF THE EXISTING BRIDGE

SCALE: AS NOTED